

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 Claim 1 (currently amended): A method for determining the  
2 topology of a network when a network tree, built from data  
3 relating to discovered devices of the network, includes one  
4 or more unresolved branches, the method comprising:

5 for each unresolved branch of the network tree,  
6 attempting to determine the type of each of the discovered  
7 network devices on the branch, ~~and~~;

8 if the type of each discovered network device on the  
9 branch is determined to be an endstation type, inferring  
10 that an undiscovered connecting device is present on the  
11 branch; and

12 if the type of at least one discovered network device  
13 on the branch is not an endstation type, leaving the  
14 topology of the branch unresolved.

1 Claim 2 (currently amended): ~~A~~The method as claimed in  
2 claim 1, wherein, if an undiscovered network device is  
3 inferred to be present on a branch, the method further  
4 comprises the step of:

5 resolving the topology of the branch by determining  
6 that the discovered network devices on the branch are  
7 connected to respective ports of the inferred connecting  
8 device.

1 Claim 3 (currently amended): AThe method as claimed in  
2 claim 1, further comprising the step of:  
3 presenting the determined network topology as a network  
4 map, the map comprising icons representing network devices  
5 and lines representing network links, wherein the inferred  
6 connecting device is represented differently from a  
7 discovered connecting device.

1 Claim 4 (currently amended): AThe method as claimed in  
2 claim 1, wherein the received data comprises address table  
3 data for the ports of one or more managed connecting devices  
4 on the network, the address table data including the  
5 identity of each said port and the identity of other network  
6 devices which the port has ~~learned~~ learned.

1 Claim 5 (currently amended): AThe method as claimed in  
2 claim 4, ~~wherein the step of building a network tree~~  
3 ~~comprises~~ further comprising the steps, in building the  
4 network tree, of selecting a discovered connecting device as  
5 a root node, and building a data representation of the tree  
6 from the root node, the data representation comprising at  
7 least one branch from a respective port of the root node,  
8 each branch comprising the identity of the port and the  
9 identity of at least one child node on the branch.

1 Claim 6 (currently amended): AThe method as claimed in  
2 claim 5, wherein, after building the network tree, the  
3 method comprises the step of:  
4 determining whether the topology of one or more  
5 branches of the tree is unresolved.

1 Claim 7 (currently amended): ~~A~~The method as claimed in  
2 claim 6~~7~~ wherein the step of determining whether the  
3 topology of one or more branches of the tree is unresolved  
4 comprises the steps of:  
5 a) selecting a port of the root node;  
6 b) considering whether the branch from the selected  
7 port has more than one child node, and  
8 c) if the branch from the port has more than one child  
9 node, determining that the branch is unresolved.

1 Claim 8 (currently amended): ~~A~~The method as claimed in  
2 claim 7~~7~~ further comprising the step of repeating steps a),  
3 b) and c) for each port of each discovered connecting  
4 device.

Claim 9 (canceled)

1 Claim 10 (currently amended): ~~A~~The method as claimed in  
2 claim 1~~7~~ wherein the network tree is built using the steps  
3 of:  
4 receiving data relating to discovered devices on the  
5 network, and  
6 using the received data to build a network tree.

1 Claim 11 (currently amended): A computer readable medium  
2 including a computer program for determining the topology of  
3 a network when a network tree, built from data relating to  
4 discovered devices of the network, includes one or more  
5 unresolved branches, the program comprising the steps of:  
6 ~~a program step for~~ attempting to determine the type of  
7 each of the discovered network devices on an unresolved  
8 branch of the network tree~~, and;~~;

9           ~~a program step for~~ inferring that an undiscovered  
10 connecting device is present on the unresolved branch if the  
11 type of each discovered network device on the branch is  
12 determined to be an endstation type; and  
13           if at least one discovered network device on the  
14 unresolved branch is determined not to be an endstation  
15 type, leaving the topology of the branch unresolved.

1       Claim 12 (currently amended): A network management apparatus  
2 for determining the topology of a network, the apparatus  
3 comprising:

4           a memory for receiving and storing data relating to  
5 discovered devices on the network;

6           a processor, coupled to the memory, the processor  
7 configured to build a network tree using the received data,  
8 and, for each unresolved branch of the network tree, to  
9 attempt to determine the type of each of the discovered  
10 network devices on the branch;<sub>i</sub>

11       wherein, if the type of every discovered network device  
12 on an unresolved branch is determined to be an endstation  
13 type, the processor infers that an undiscovered connecting  
14 device is present on the branch, and if at least one  
15 discovered network device on the unresolved branch is  
16 determined not to be an endstation type, the processor does  
17 not infer the topology of the unresolved branch of the  
18 network.

1       Claim 13 (currently amended): ~~A~~The network management  
2 apparatus as claimed in claim 12<sub>i</sub> further comprising:

3           means for presenting a network map showing the  
4 determined topology of the network selected from the group  
5 consisting of a display and a printer.